

What is claimed is:

1 1. A control circuit for use in a video processor which combines
2 automatic kinescope bias (AKB) control, and average individual beam
3 current sensing and limiting in at least one CRT, comprising:

4 automatic kinescope bias (AKB) control circuitry for detecting
5 a magnitude of individual red (R), green (G) and blue (B) cathode
6 currents driving corresponding R, G and B CRTs, generating R, G and
7 B average cathode current control signals therefrom, and using the
8 R, G and B average cathode current control signals as feedback to
9 the video processor to attenuate the R, G and B cathode currents
10 approximately equal amounts; and

11 selective beam current limiting circuitry which compares at
12 least one of the R, G and B average current control signals with a
13 predetermined signal, and whereupon the at least one of the R, G
14 and B average current control signals exceeds the predetermined
15 signal, introducing a gain reduction in corresponding video gain
16 stages within the video processor to limit said at least one of the
17 R, G and B average current control signals.

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19 2. The control circuit set forth in claim 1, wherein said gain
20 reduction is implemented using said one of the R, G and B current
21 control signals for DC bias control.

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23 3. The control circuit set forth in claim 1, wherein said

1 selective beam current limiting circuitry utilizes and average
2 current control signal is derived from the current driving the blue
3 CRT.

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5 4. A projection television system including three separate
6 cathode ray tubes (CRTs) and a video processor with a control
7 circuit including combined automatic kinescope bias (AKB) control
8 circuitry and average individual beam current sensing and limiting
9 in at least one CRT for sensing and limiting an average individual
10 beam current in each of the three separate CRTs, wherein the
11 control circuit comprises:

12 automatic kinescope bias (AKB) control circuitry for detecting
13 a magnitude of individual red (R), green (G) and blue (B) cathode
14 currents driving corresponding R, G and B CRTs, generating R, G and
15 B average cathode current control signals therefrom, and using the
16 R, G and B average cathode current control signals as feedback to
17 the video processor to reduce the R, G and B cathode currents
18 approximately equal current amounts; and

19 selective beam current limiting circuitry which compares at
20 least one of the R, G and B average current control signals with a
21 predetermined signal, and whereupon the at least one of the R, G and B
22 average current control signals exceeds the predetermined signal,
23 introducing a gain reduction in corresponding video gain stages
24 within the video processor to limit said at least one of the R, G

1 and B average current control signals.

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3 5. An automatic kinescope bias (AKB) control signal for use in a
4 projection television system which includes at least two separate
5 cathode ray tubes (CRTs) and a video processing control circuit
6 with circuitry for combined automatic kinescope bias (AKB) control,
7 and circuitry for sensing and limiting an average individual
8 cathode beam current in the at least two separate CRTs, said AKB
9 signal generated by steps including:

10 sampling an average cathode beam current provided to each of
11 the at least two CRTs and generating a corresponding cathode
12 current level signal by said sampling; and

13 utilizing each generated cathode current level signal to
14 determine an average CRT cathode beam current driving an electron
15 gun in the corresponding CRT, and generating an automatic kinescope
16 bias control signal in accordance with a magnitude of said average
17 cathode beam current for use as a feedback signal for at least one
18 of: automatic CRT cut-off stabilization and selective beam
19 limiting.

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